

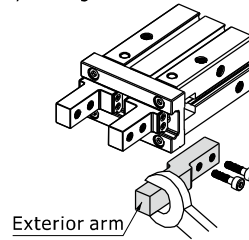
# Air gripper(parallel style)

## HFZ,HFK,HFKL Series

**Bore size:  $\Phi 10$ ,  $\Phi 16$ ,  $\Phi 20$ ,  $\Phi 25$ ,  $\Phi 32$ ,  $\Phi 40$**

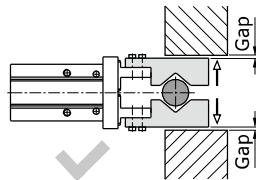
7. The installation method of the gripping jaw fittings When install the gripping jaw fittings, you have to pay particular attention that you can only hold the gripping jaw by using spanner, and then lock the screws with allen wrench. Never clamp the body directly and then lock the screws, otherwise the parts will be easily damaged.

Bore size	The bolts type	Max. locking moment(Nm)
6	M2×0.4	0.15
10	M2.5×0.45	0.31
16	M3×0.5	0.59
20	M4×0.7	1.4
25	M5×0.8	2.8
32	M6×1.0	4.9
40	M8×1.25	11.8

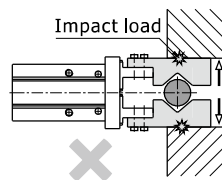


8. Confirm that there is no external forces exerted on the gripping jaw. Transverse load acts on the gripping jaw, which will cause impact load and leads to the shaking and damage of gripping jaw. Equip with gaps so that the air gripper will not crash into work-pieces and accessories at the end of its trip.

8.1) The end of stroke under the open state of air gripper

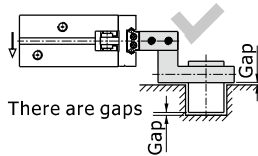


There are gaps

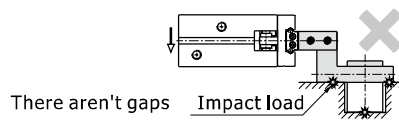


There aren't gaps

8.2) The end of stroke under the move state of air gripper



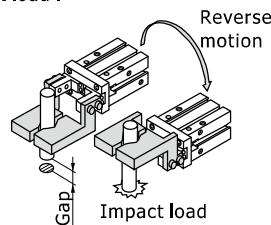
There are gaps



There aren't gaps Impact load

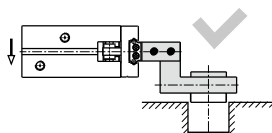
8.3) Reverse motion state

When reverse motion state, the gripping point must be precision, otherwise in the reverse motion state the air gripper maybe impact with ambience and will cause impact load .

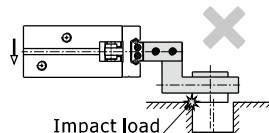


Reverse motion  
Gap  
Impact load

9. When the work-pieces are inserted, the center line should be coaxial, no offset, in case there are external force generated on gripping jaw. When testing, it is specially required that the manual operation should be reduced, the pressure should be used to run it at a low speed, and guarantee the safety and no impact.



Center coaxial



Impact load  
Center offset

10. Please use the flow control valve to adjust the opening and closing speed of gripping jaw if too fast.

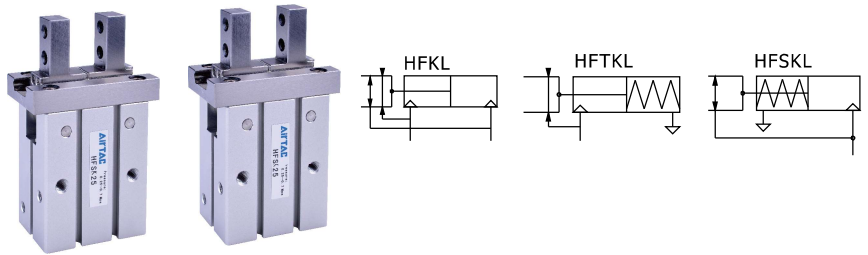
11. People can not enter the movement path of air gripper and articles can not be placed on the path too.

12. Before removing the air gripper, please confirm that it is out of working state, and then discharge of compressed air.



# Air gripper—HFKL Series

## Parallel style with guide track—Roller bearing and longer stroke



### Ordering code

**HFKL 20** □

①      ②      ③

#### ① Model

HFKL: Air finger(Double acting/Longer stroke)

HFSKL: Air finger(Single acting and normally closed/Longer stroek)

HFTKL: Air finger(Single acting and normally opened/Longer stroke)

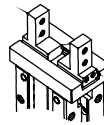
#### ② Bore size

10 16 20 25

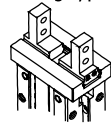
HFKL series are all attached with magnet.  
Sensor should be ordered individually.

#### ③ Finger type

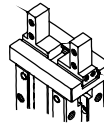
Blank: Standard



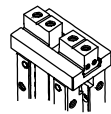
N: Thru.hole mounting type



B: Side mounting type



F: Bottom mounting type



### Specification

Bore size (mm)		10	16	20	25
Acting type		Double acting		Single acting	
Fluid		Air(to be filtered by 40μm filter element)			
Operating pressure	Double acting	10 16/20/25	28~100psi(0.2~0.7MPa) 22~100psi(0.15~0.7MPa)		
	Single acting	10 16/20/25	50~100psi(0.35~0.7MPa) 36~100psi(0.25~0.7MPa)		
Temperature		-20~70°C			
Lubrication		Not required			
Repeatability mm		±0.01			
Max. frequency		120(c.p.m)			
Sensor switches		CMSh DMSH, EMSH		CMSG, DMSG, EMSG CMSh, DMSH, EMSH	
Port size		M3×0.5		M5×0.8	

Add) Refer to P530 for detail of sensor.



### Gripping force and stroke

Acting type		Double acting(HFKL)				Single acting_NO (HFTKL)				Single acting_NC (HFSKL)			
Bore size		10	16	20	25	10	16	20	25	10	16	20	25
Gripping force per finger Effective value(N)	External	11	34	45	69	7	27	35	55	-	-	-	-
	Internal	17	45	68	102	-	-	-	-	13	38	59	87
Opening/Closing stroke(Both sides)(mm)		8	12	18	22	8	12	18	22	8	12	18	22
Weight (g)	F Type	64	146	275	484	74	154	294	530	73	154	294	528
	Others	64	146	273	489	73	155	292	525	72	155	292	523

[Note] The gripping force in the above table is in the working pressure of 75psi, and with a gripping point of L=20mm.

Add) Please refer to page 493 for the definition of "L".

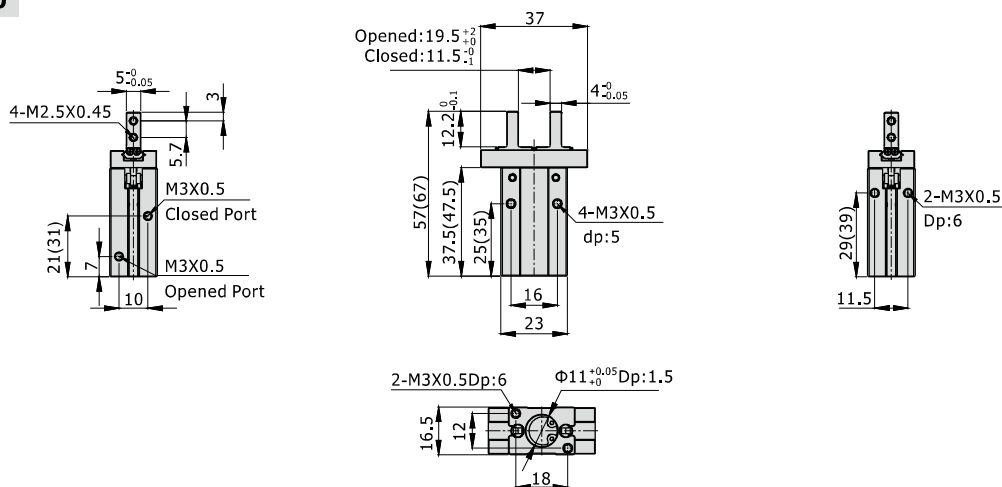
### Inner structure

Inner structure is the same as "HFK series", Please refer to page 485 for details.

### Dimensions

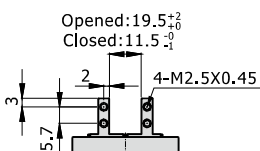
#### HFKL10

[Unit: mm]

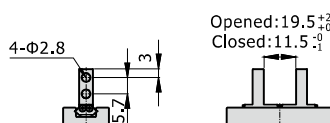


[Note]The values in "( )" in the above table are single acting type sizes.

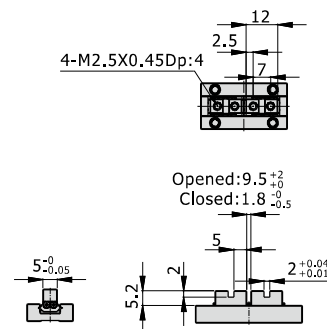
#### Side mounting type(B type)



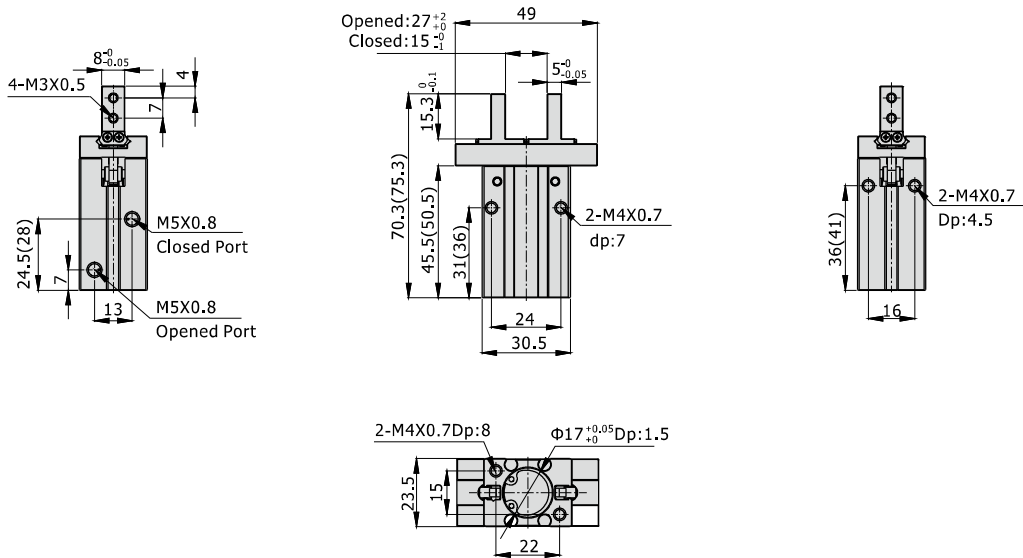
#### Thru.hole mounting type(N type)



#### Bottom mounting type(F type)

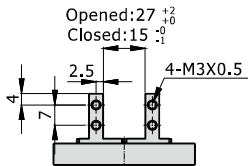


#### HFKL16

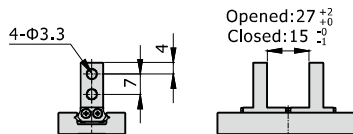


[Note]The values in "( )" in the above table are single acting type sizes.

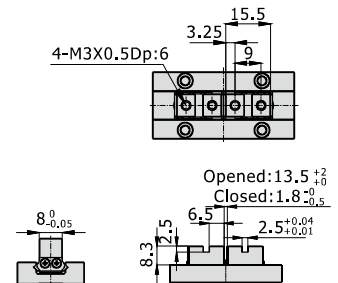
#### Side mounting type(B type)



#### Thru.hole mounting type(N type)



#### Bottom mounting type(F type)

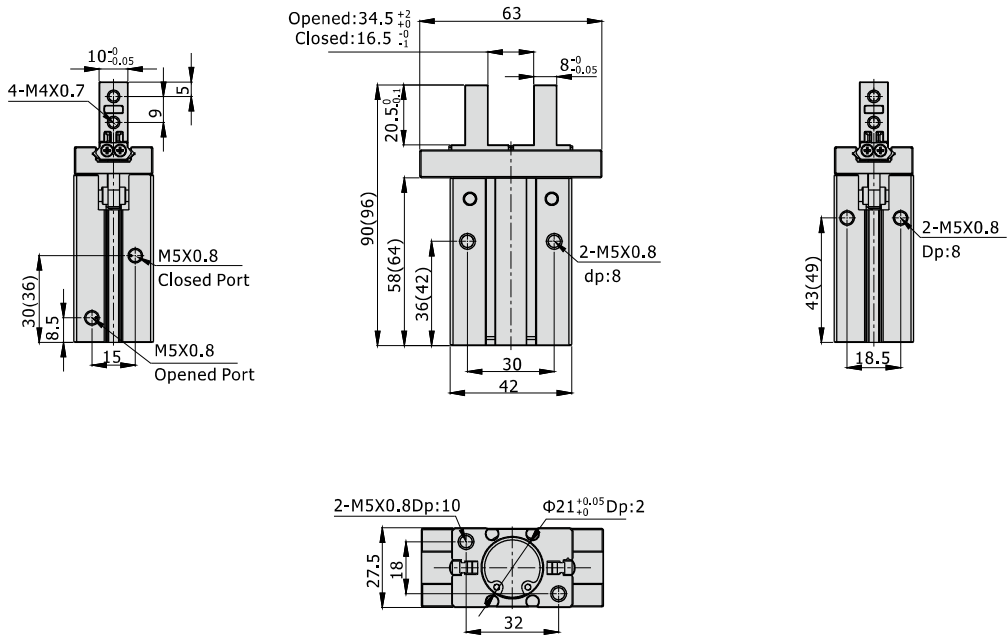


# Air gripper(parallel style——Roller bearing/Longer stroke) **AIRTAC**

## HFKL Series

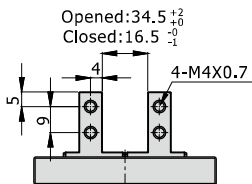
Bore size:  $\Phi 10$ ,  $\Phi 16$ ,  $\Phi 20$ ,  $\Phi 25$

### HFKL20

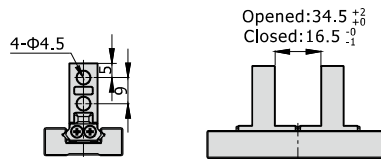


[Note]The values in "( )" in the above table are single acting type sizes.

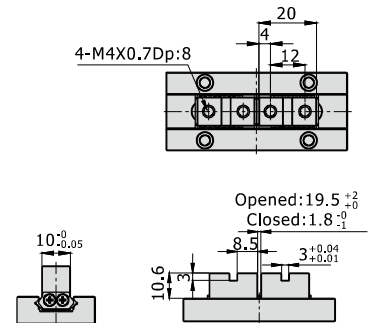
#### Side mounting type(B type)



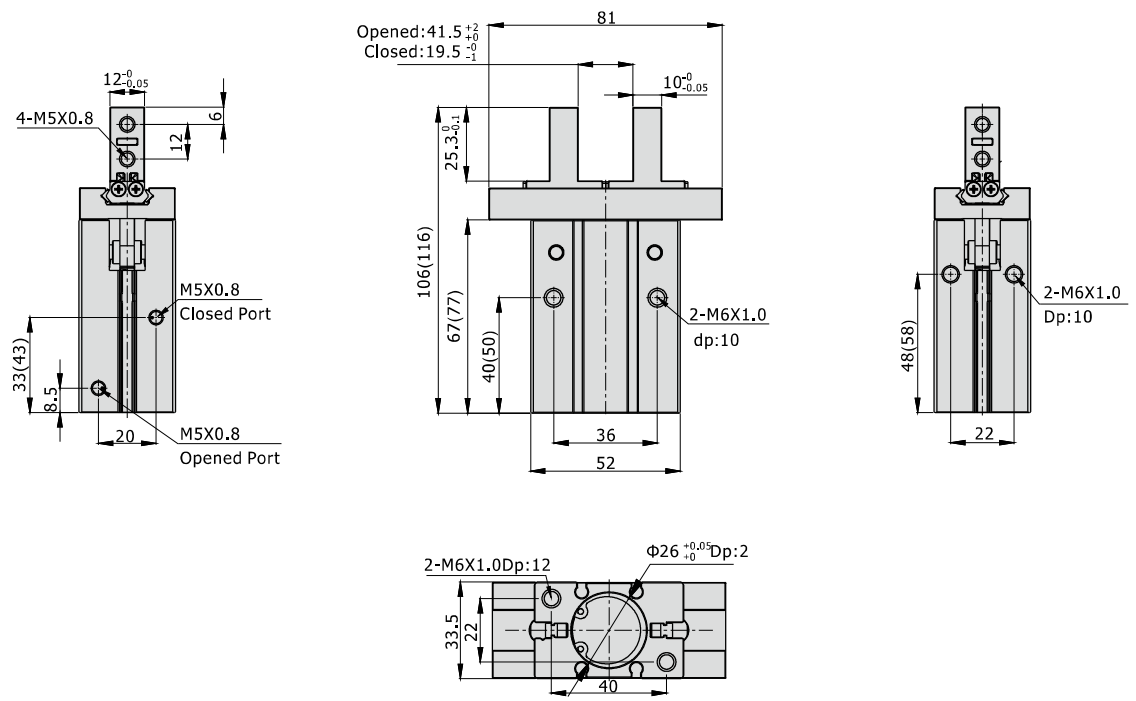
#### Thru.hole mounting type(N type)



#### Bottom mounting type(F type)

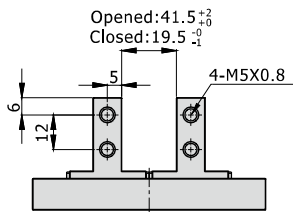


### HFKL25

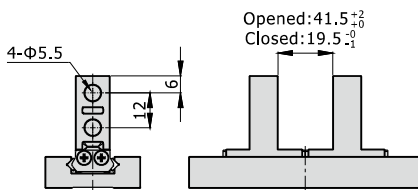


[Note]The values in “( )” in the above table are single acting type sizes.

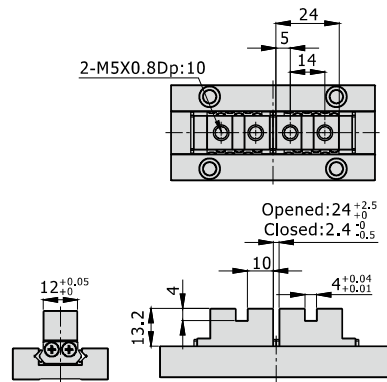
#### Side mounting type(B type)



#### Thru.hole mounting type(N type)



#### Bottom mounting type(F type)



## How to select product \ Installation and application

Please refer to HFK series for details.

